

ClaimsWe Claim:

1. A stacking device for a thermoplastic container lid, comprising:
a main member;
5 a plurality of support members extending from the main member having a first plurality of interference fits; and
a plurality of wall members joined to the support surfaces having a second plurality of interference fits;
wherein the first plurality of interference fits are capable of resisting relative
10 movement of the support members and the lid in a first direction and the second plurality of interference fits are capable of resisting relative movement of the wall members and the lid in a second direction transverse to the first direction.
2. The stacking device of claim 1, wherein the support members extend
15 perpendicularly from the main member.
3. The stacking device of claim 1, wherein each of the wall members is c-shaped and includes a curved main portion having opposed first and second ends.
- 20 4. The stacking device of claim 3, wherein each of the support members varies in width and wherein the first and second ends of each of the wall members are curved and wherein the first and second ends of the wall members define a third plurality of openings.
- 25 5. The stacking device of claim 4, wherein each of the third plurality of openings has a width defined by the shortest distance between the end portions of the wall member.
- 30 6. The stacking device of claim 1, in combination with a plurality of container lids.

7. The stacking device of claim 6, wherein each container lid is circular in shape and has a diameter larger than the widths of the third plurality of openings.

5 8. The stacking device of claim 7, wherein the wall members define a fourth plurality of cavities and wherein each container lid is disposed in one of the cavities.

9. The stacking device of claim 8, wherein each of the wall members includes an inner periphery and wherein the inner peripheries define a fifth plurality of openings and wherein each lid is disposed adjacent one of the fifth plurality of openings.

10 10. The stacking device of claim 1, in combination with a container lid disposed in a cavity formed by the support members and wall members.

11. The stacking device of claim 10, wherein the container lid includes a tab.

15 12. The stacking device of claim 10, wherein the container lid is mounted on a peripheral rim of a container.

20 13. The stacking device of claim 12, wherein the peripheral rim interferes with one of the wall members to support the container.

14. The stacking device of claim 12, wherein the peripheral rim is disposed in contact with the one wall member to support the container.

15. A stacking device, comprising:

a main member;

a plurality of first means extending from the main member having a first interference fit;

5 a plurality of second means extending from the first means having a second interference fit;

10 wherein the first interference fits are capable of resisting relative movement of the stacking device and container lids in a first direction and the second interference fits are capable of resisting relative movement of the stacking device and container lids in a second direction transverse to the first direction; and

third means for establishing a resistance force that increases during insertion and removal of container lids from the stacking device.

15 16. The stacking device for thermoplastic container lids of claim 15, further comprising a plurality of first, second, and third openings wherein the first openings have a width greater than a width of the second and third openings.

20 17. The stacking device for thermoplastic container lids of claim 15, further comprising a horseshoe shape.

18. A combination, comprising:

a stacking device including a main member, a first plurality of support members, extending from the main member, and a second plurality of wall members extending from the support members, the support members and wall members defining a third plurality of
5 cavities bounded by fourth and fifth pluralities of openings; and

a sixth plurality of container lids, wherein the support members and wall members define interference fits with the container lids and wherein each of the container lids experiences a resistance force that increases during insertion and removal from the
10 stacking device.

19. The combination of claim 18, wherein the container lid is disposed on a container.

20. The combination of claim 19, wherein the container includes a peripheral
15 rim.

21. The combination of claim 20, wherein the peripheral rim is disposed on the wall members.

22. The combination of claim 18, wherein the wall members include a plurality
20 of third openings therein and wherein the lids are disposed adjacent the third openings.

23. The combination of claim 18, wherein the lids are disposed in the cavities
25 formed by the support members and wall members.

24. The combination of claim 18, wherein the lids include tabs.

25. The combination of claim 18, wherein the support members include a
30 plurality of end portions.

26. The combination of claim 25, wherein a plurality of first openings are defined between the end portions.

5 27. The combination of claim 26, wherein the widths of the first openings are defined by the shortest distance between the end portions.

28. The combination of claim 27, wherein the end portions define a chord having a diameter.

10 29. The combination of claim 28, wherein the container is circular in shape and has a diameter and wherein the diameter of the container is greater than the length of the chord.

30. A one-piece stacking device, comprising:

a main member;

support members joined to the main member and having a plurality of first interference fits;

5 wall members extending from the support members and having a plurality of second interference fits;

wherein the first interference fits are capable of resisting relative movement of an object in a first direction and the second interference fits are capable of resisting relative movement of an object in a second direction transverse to the first direction; and

10 a plurality of openings defined by the support members and the wall members; wherein the wall members include interference members adjacent the openings.

31. The one-piece stacking device of claim 30, wherein the objects contained therein are container lids.

15 32. The one-piece stacking device of claim 31, wherein the container lid is disposed on a container.

20 33. The one-piece stacking device of claim 32, wherein a peripheral rim and the container lid are capable of being disposed in cavities formed by the support members and wall members.

25 34. The one-piece stacking device of claim 33, wherein the peripheral rim interferes with the wall members to support the container.

35. The one-piece stacking device of claim 30, wherein the lids include tabs.

30 36. The stacking device of claim 30, wherein the main member is square-shaped.

37. A stacking device, comprising:

a main member;

support members joined to the main member and defining a first plurality of interference fits;

5 wall members extending from the support members and defining a second plurality of interference fits;

wherein the first interference fits are capable of resisting movement of an object in a first direction and the second interference fits are capable of resisting movement of the object in a second direction transverse to the first direction;

10 wherein the main member, the support members, and the wall members are formed integrally;

a plurality of openings defined by the support members and the wall members; and

wherein the wall members include interference members adjacent the openings.

15 38. The stacking device of claim 37, wherein the object contained therein is a container lid.

39. The stacking device of claim 38, wherein the container lid is disposed on a container.

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40. The stacking device of claim 39, wherein a peripheral rim of the container and the container lid are disposed in cavities formed by the support members and the wall members.

25 41. The stacking device of claim 40, wherein the peripheral rim interferes with the wall members to support the container.

42. The stacking device of claim 38, wherein the lids include tabs.
43. The stacking device of claim 37 wherein the main member is square-shaped.

44. A combination, comprising:

a stacking device including a main member, a plurality of support members extending from the main member, and a plurality of wall members extending from the support members, the support members and the wall members defining a plurality of
5 cavities and wherein the main member, support members, and the wall members are formed integrally; and

a plurality of container lids, wherein the support members and the wall members define a plurality of interference fits with the container lids.

10 45. The combination of claim 44, wherein the container lids are disposed on a container.

46. The combination of claim 45, wherein the container lids are disposed in the cavities formed by the support members and the wall members.

15 47. The combination of claim 46, wherein the container lids include tabs.

48. The combination of claim 45, wherein the container lids include a container having a peripheral rim.

20 49. The combination of claim 48, wherein the peripheral rim is disposed on the wall members.

25 50. The combination of claim 44, wherein the stacking device is square-shaped.